



PATENT

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Applicant(s) de Groot, et al. Examiner: Graser, J.
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VACCINES

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Signed: Julie L. Watts

SUPPLEMENTAL SUBMISSION

Sir:

Attached herewith is Exhibit "1" which contains a Curriculum Vitae of Peter
Wilhelmus Maria Hermans to supplement the Rule 132 Declaration of Dr. Hermans which
was filed along with the Amendment under 37 C.F.R. §1.116 filed on January 11, 2005 in
connection with the above-identified application.

If the Examiner has any questions regarding this Submission, the Examiner is invited
to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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CURRICULUM VITAE

Name Peter Wilhelmus Maria Hermans
Date of birth May 6, 1964
Place of birth Born, The Netherlands

Partner Hendrika Berends
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Home address Bachlaan 204
3261 WC Oud-Beijerland
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Education

High School (VWO-B)
Bisschoppelijk College Sittard
The Netherlands
1976-1982

Biological Sciences (Biochemistry, Microbiology)
University of Nijmegen
The Netherlands
1982-1988

Professional training and academic appointments

1988-1992 Research fellow (PhD student)
Unit Molecular Microbiology (Dr. Jan D. A. van Embden), National Institute of
Public Health and Environmental Protection, Bilthoven, The Netherlands
Research subject: Molecular epidemiology and diagnosis of tuberculosis
PhD thesis (February 1992): Repeated DNA sequences of *Mycobacterium
tuberculosis*: molecular characterization and application in diagnosis and
epidemiology of tuberculosis
Prof. Dr. W. P. M. Hoekstra (promotor)
University of Utrecht
The Netherlands

1992-1993 Senior scientist of the Armauer Hansen Research Institute (establishment of a
tuberculosis research unit) and associate professor of the Addis Ababa
University, Addis Ababa, Ethiopia.
Research subject: Molecular epidemiology and immunology of tuberculosis

1993-present University lecturer, senior scientist and head of the laboratory of Pediatrics
(establishment of a molecular biology research unit), department of Pediatrics,
Sophia Children's Hospital, Erasmus University Rotterdam, The Netherlands
Research subject: Bacterial infectious diseases: molecular epidemiology,
molecular pathogenesis and host genetics

2001-present Director Research and Development Bacterial Vaccines, Vaxinostics Ltd.,
Erasmus University Rotterdam, The Netherlands

Teaching experience

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| 1988-present | Coaching of many students (over 20) in 6-12 month research projects |
| 1990-present | Lecturer (one week lectures and practicals) of the yearly International Course on Biotechnology, Immunology and Vaccinology (World Health Organization), Geneva/Lausanne, Switzerland |
| 1993-present | Lectures in Microbiology at various universities in The Netherlands |
| 1993-present | Coaching of PhD students (see below) |
| 1995 | Lecturer (one week lectures and practicals) in the International Course on the Molecular Epidemiology of Bacterial Infections (BIOLAC program, United Nations University) Caracas, Venezuela |
| 1997 | Lecturer (one week lectures) in the International Course on the Molecular Epidemiology of Bacterial Infections (BIOLAC program, United Nations University) La Habana, Cuba |
| 1998 | Lecturer of the Boerhaave Course on Pneumococcal Infections and Pneumococcal Vaccination. Leiden, The Netherlands |
| 1999 | Lecturer (one week lectures and practicals) of the International Refresher Course on Biotechnology, Immunology and Vaccinology (World Health Organization), Pune, India |
| 1999 | Organizer/lecturer (one week lectures and practicals) of the Biotechnology Course on Bacterial Infectious Diseases (sponsored by the Dutch government), Hanoi, Vietnam |
| 2000 | Organizer/lecturer (one week lectures and practicals) of the Biotechnology Course on Bacterial Infectious Diseases (sponsored by the Hong Kong government), Hong Kong, China |
| 2001 | Lecturer of the Boerhaave Course on Infectious Diseases. Noordwijk, The Netherlands |
| 2002 | Organizer/lecturer (one week lectures and practicals) of the Biotechnology Course on Bacterial Infectious Diseases (sponsored by the Dutch government), Ho Chi Min City, Vietnam |
| 2004 | Lecturer of the Boerhaave Course on Infectious Diseases. Noordwijk, The Netherlands |

Management experience

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|--------------|--|
| 1993-1998 | Acting head of the laboratory of Pediatrics, department of Pediatrics, Sophia Children's Hospital, Erasmus University Rotterdam, The Netherlands |
| 1993-present | Staff member of the department of Pediatrics, Sophia Children's Hospital, Erasmus University Rotterdam, The Netherlands (Chairman of Pediatrics: Prof.dr. H.A. Büller) |
| 1993-present | Board member of the scientific council of the department of Pediatrics, Sophia Children's Hospital, Erasmus University Rotterdam, The Netherlands |
| 1998-present | Head of the laboratory of Pediatrics, department of Pediatrics, Sophia Children's Hospital, Erasmus University Rotterdam, The Netherlands |
| 2000-2001 | Secretary of the Dutch Scientific Section on Microbial Pathogenesis |
| 2001-2004 | Chairman of the Dutch Scientific Section on Microbial Pathogenesis |
| 2002-2004 | Chairman of the scientific board of the Dutch Society for Medical Microbiology |

Other activities

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|--------------|--|
| 1993-present | Reviewer for many international journals, e.g. all ASM Journals, the Journal of Infectious Diseases and Lancet. |
| 1996 | Member of the PhD committee of Dr. E.M. Bik (Thesis: Vaccine development and evolution of epidemic <i>Vibrio cholerae</i> strains), University of Utrecht, The Netherlands |
| 1996 | Member of the PhD committee of Dr. B. Wieles (Thesis: Thioredoxin and thioredoxin reductase of pathogenic mycobacteria), University of Leiden, The Netherlands |

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| 1997 | Organizer of the Fourth European Meeting on the Molecular Biology of the Pneumococcus, Lunteren, The Netherlands |
| 1997 | Member of the European Commission COST/STD Initiative Expert Panel IX: Vaccines against Tuberculosis |
| 1999-2000 | Organizer of the scientific program of the Dutch Scientific Section on Microbial Pathogenesis |
| 2001-2002 | Member of the scientific advisory board on universal vaccination against meningococcal serogroup C and pneumococcal disease of the Health Council of the Netherlands |
| 2001-present | Member of the editorial board of Lancet Infectious Diseases |
| 2001 | Member of the Jury of the Interbrew-Baillet Health Prize 2001 (Fonds National de la Recherche Scientifique, Belgium) |
| 2001 | Member of the PhD committee of Dr. H.J. Wisselink (Thesis: <i>Streptococcus suis</i> infections in pigs) |
| 2002 | Member of the PhD committee of Dr. W.B. van Leeuwen (Thesis: Binary typing of <i>Staphylococcus aureus</i>) |
| 2002 | Member of the PhD committee of Dr. K. Lagrou (Thesis: Interaction between <i>Streptococcus pneumoniae</i> and in vitro human nasopharyngeal epithelium) |
| 2002 | Member of the PhD committee of Dr. I.H.M. van Loo (Thesis: Vaccine-driven evolution of <i>Bordetella pertussis</i> changes in population structure and strain fitness) |
| 2003 | Member of the PhD committee of Dr. A.W. Rijneveld (Thesis: Pneumonia: an investigation of host defense mechanisms) |
| 2003 | Member of the PhD committee of Dr. S. van Selm (Thesis: Generation of capsule diversity in <i>Streptococcus pneumoniae</i>) |
| 2003 | Member of the PhD committee of Dr. N. de Vries (Thesis: Gene regulation and host adaptation in <i>Helicobacter pylori</i>) |
| 2004 | Member of the PhD committee of Dr. P.J.G. Zwijnenburg (Thesis: Local inflammatory response in bacterial meningitis). Vrije Universiteit Amsterdam. Promotors: Prof.dr. J.J. Roord, Prof.dr. T. van der Poll. Co-promotor: Dr. A.M. van Furth. |
| 2004 | Member of the PhD committee of Dr. R.H. Veenhoven (Thesis: Pneumococcal vaccines for acute otitis media). Universiteit Utrecht. Promotors: Prof.dr. A.M. Sanders, Prof.dr. W. Kuis. Co-promotors: Dr. A.G.M. Schilder, Dr. Ir. G.T. Rijkers. |
| 2004 | Member of the PhD committee of Dr. J.L. Nouwen (Thesis: Determinants risks & dynamics of <i>Staphylococcus aureus</i> nasal carriage). Erasmus Universiteit Rotterdam. Promotors: Prof.dr. H.A. Verbrugh, Prof.dr. A. Hofman, Prof.dr. A. van Belkum. |

PhD theses

Copromotor of Dr. K. Overweg; PhD thesis: *Streptococcus pneumoniae*, molecular epidemiological aspects and the identification of virulence factors (2000; Erasmus University Rotterdam, The Netherlands)

Copromotor of D. Bogaert; PhD thesis: Host-pathogen interaction during *Streptococcus pneumoniae* colonization and infection (2004; Erasmus University Rotterdam, The Netherlands)

Memberships

Dutch Scientific Section on Microbial Pathogenesis
Dutch Society for Microbiology
Dutch Society for Medical Microbiology
Dutch Society for Infectious Diseases
American Society for Microbiology

Grants obtained since 1994

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| Project | Characterization of the role of adhesion in the pathogenesis of infections caused by <i>Streptococcus pneumoniae</i> |
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| Sponsor: | Sophia Foundation for Medical Research (grant no. 177) |
| Period | 1994-1995 |
| Budget | DFL 200,000.- |
| Project | Molecular epidemiology of infections by <i>Streptococcus pneumoniae</i> in children and adults |
| Sponsor | Sophia Foundation for Medical Research (grant no. 194) |
| Period | 1995-1996 |
| Budget | DFL 200,000.- |
| Project | Functional and genetic characterization of adhesins involved in the pathogenesis of infections caused by <i>Streptococcus pneumoniae</i> |
| Sponsor | Sophia Foundation for Medical Research (grant no. 183) |
| Period | 1995-1998 |
| Budget | DFL 300,000.- |
| Project | Non-invasive markers for the diagnosis of Asthma in children |
| Sponsor | Dutch Asthma Foundation (grant no. 94.14) |
| Period | 1995-1998 |
| Budget | DFL 500,000.- |
| Project | Genetic characterization of drug-resistant <i>Streptococcus pneumoniae</i> in The Netherlands |
| Sponsor | Sophia Foundation for Medical Research (grant no. 217) |
| Period | 1997-1998 |
| Budget | DFL 200,000.- |
| Project | Clinical and molecular epidemiological studies of colonization and infection by <i>Streptococcus pneumoniae</i> in children and adults, and molecular pathogenesis of pneumococcal infection studied in animal models |
| Sponsor | Sophia Foundation for Medical Research (grant no. 268) |
| Period | Dutch Science Foundation NWO-SGO (grant no. 005) |
| Budget | 1999-2003 |
| | DFL 500,000.- (SSWO) |
| | DFL 100,000.- (NWO-SGO) |
| Project | The protease maturation protein Pmp of <i>Streptococcus pneumoniae</i> : immune-protective potentials and its role in the pathogenesis of infection |
| Sponsor | Sophia Foundation for Medical Research (grant no. 297) |
| Period | 2000-2001 |
| Budget | DFL 250,000.- |
| Project | Identification of transcriptionally regulated virulence factors and regulatory genes using a <i>Streptococcus pneumoniae</i> genome microarray |
| Sponsor | Sophia Foundation for Medical Research (grant no. 319) |
| Period | 2001-2002 |
| Budget | DFL 200,000.- |
| Project | Immune protective potential of the putative proteinase maturation protein (PpmA) of <i>Streptococcus pneumoniae</i> , fase 1 |
| Sponsor | Dutch Science Foundation NWO-STIGON (Grant no. 014-80-114) |
| Period | 2001-2002 |
| Budget | DFL 300,000.- |
| Project | Identification of signal networks regulating the expression of virulence genes in <i>Streptococcus pneumoniae</i> |
| Sponsor | Sophia Foundation for Medical Research (grant no. 356) |
| Period | 2002-2005 |
| Budget | € 250,000.- |

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| Project | Genetic polymorphism within host and pathogen and its relation with infectious diseases and autoimmunity |
| Sponsor | The Board of the University Hospital Rotterdam (Revolving Fund) |
| Period | 2002-2004 |
| Budget | € 372,500.- |
| Project | Development of eradication methods for <i>Moraxella catarrhalis</i> , a major cause of otitis media in children |
| Sponsor | Sophia Foundation for Medical Research (grant no. 397) |
| Period | 2003-2004 |
| Budget | € 116,860.- |
| Project | Immune protective potential of the putative proteinase maturation protein (PpmA) of <i>Streptococcus pneumoniae</i> , fase 2 |
| Sponsor | Dutch Science Foundation ZON MW-STIGON (grant no. 014-81-114) |
| Period | 2003-2004 |
| Budget | € 222,000.- |
| Project | Development of specific monoclonal antibodies for the prevention of nosocomial infections caused by coagulase-negative staphylococci (CNS) in neonates |
| Sponsor | Erasmus MC, dept. of Pediatrics |
| Period | 2003-2006 |
| Budget | € 250,000.- |
| Project | Development and application of genomic array footprinting in <i>Streptococcus pneumoniae</i> , a high-throughput technology for genome-wide identification and analysis of essential genes in bacteria |
| Sponsor | IOP Genomics (Senter) |
| Period | 2004-2007 |
| Budget | € 650,000.- |
| Project | Genomics of host-respiratory virus interactions. Towards novel intervention strategies (VIRGO project) |
| Sponsor | BISK (Senter) |
| Period | 2005-2008 |
| Budget | € 440.000.- (postdoc for 4 years + laboratory equipment € 120.000.-) |
| Project | Genetic polymorphisms in host and pathogen associated with infection: chronic hepatitis C (DITTO project) |
| Sponsor | European Commission, via Prof.dr. S.W. Schalm |
| Period | 2004-2005 |
| Budget | € 50.000.- |

Patents

The international patent application PCT/NL00/00569 entitled 'Pneumococcal Vaccines' has been filed August 14, 2000. A novel patent application, titled 'Method for selecting and producing vaccine components and vaccines based thereon' has been filed May 16, 2003. These patent applications comprise techniques used in the identification of surface-associated pneumococcal proteins, as well as pneumococcal surface proteins and their therapeutic potential.

Publications in international peer-reviewed journals

Van Belkum, A., D. Bogaert, P.W.M. Hermans. Nasopharyngeal colonization with *Staphylococcus aureus* and *Streptococcus pneumoniae* in children is genotype independent. Submitted.

Tonnaer E.L., G.T. Rijkers, J.F. Meis, C.H. Klaassen, D. Bogaert, P.W.M. Hermans, and J.H. Curfs. Genetic relationship between pneumococcal populations originating from nasopharynx, adenoid and tympanic cavity in children with otitis media. Submitted to JID

Menges, T., P.W.M. Hermans, S. G. Little, T. Langefeld, M. Kostrzewa, J. Engel, J. Mühling, K. Weismüller, J. Stricker, E. Nieuwenhuis, M. Emonts, R. de Groot, and G. Hempelmann. Genetic polymorphisms as early predictors for the outcome of severely injured trauma patients. Submitted to Am. J. Respir. Crit. Care Med.

Hays J.P., R. Gorkink, T. Hoogenboezem, G. Simons, K. Eadie, P.W.M. Hermans, C.M. Verduin, H. Verbrugh, and A. van Belkum. Complement resistant and complement sensitive isolates within the *Moraxella catarrhalis* species actually represent two distinct subspecies. Submitted to App. Env. Microbiol.

Bogaert, D., P.W.M. Hermans, H. Boelens, M. Sluijter, A. Luijendijk, H.C. Rümke, S. Koppen, A. van Belkum, R. de Groot, and H.A. Verbrugh. Epidemiology of nasopharyngeal carriage of *Neisseria meningitidis* in healthy Dutch children. Clin. Infect. Dis, accepted for publication.

Bogaert, D., R.H. Veenhoven, R. Ramdin, I.H.T. Luijendijk, G.T. Rijkers, E.A.M. Sanders, R. de Groot, and P.W.M. Hermans. Pneumococcal conjugate vaccination does not induce persisting mucosal IgA response in children with recurrent acute otitis media. Vaccine, accepted for publication.

Bogaert, D., R.H. Veenhoven, M. Sluijter, W.J.W. Wannet, G.T. Rijkers, T.J. Mitchell, S.C. Clarke, W.H.F. Goessens, A.G. Schilder, E.A.M. Sanders, R. de Groot, and P.W.M. Hermans. 2005. Molecular epidemiology of pneumococcal colonization in response to pneumococcal conjugate vaccination in children with recurrent acute otitis media. J. Clin. Microbiol. 43:74-83.

Veenhoven, R.H., D. Bogaert, A.G.M. Schilder, G.T. Rijkers, C.S.P.M. Uiterwaal, H.H. Kiezebrink, M.J.P. van Kempen, I.J. Dhooge, J. Bruin, E.P.F. IJzerman, R. de Groot, W. Kuis, P.W.M. Hermans, conjugate and polysaccharide vaccination in children with a history of recurrent acute otitis media. Clin. Infect. Dis. 39:911-919.

Bogaert, D., M. Sluijter, R. de Groot, and P.W.M. Hermans. 2004. Multiplex opsonophagocytosis assay (MOPA): a useful tool for the monitoring of the 7-valent pneumococcal conjugate vaccine. Vaccine 22:4014-4020.

Adrian, P.V., D. Bogaert, M. Oprins, S. Rapola, M. Lahdenkari, T. Kilpi, R. de Groot, H. Käyhty, and P.W.M. Hermans. 2004. Development of antibodies against pneumococcal proteins α -Enolase, immunoglobulin A1 protease, streptococcal lipoprotein rotamase A, and putative proteinase maturation protein A in relation to pneumococcal carriage and Otitis Media. Vaccine 22:2737-2742.

Kerr, A.R., P.V. Adrian, S.C. Estevão, R. de Groot, G. Alloing, J.P. Claverys, T.J. Mitchell, and P.W.M. Hermans. 2004. The Ami-AliA/AliB permease of *Streptococcus pneumoniae* is involved in nasopharyngeal colonization but not in invasive disease. Infect. Immun. 72:3902-3906.

Bogaert, D., R.H. Veenhoven, M. Sluijter, E.A.M. Sanders, R. de Groot, and P.W.M. Hermans. 2004. Colony blot assay: a useful method to detect multiple pneumococcal serotypes within clinical specimens. FEMS Immunol. Med. Microbiol. 41:259-264.

Bogaert, D., A. van Belkum, M. Sluijter, A. Luijendijk, R. de Groot, H.C. Rümke, H.A. Verbrugh, and P.W.M. Hermans. 2004. Colonisation by *Streptococcus pneumoniae* and *Staphylococcus aureus* in healthy children. Lancet 363:1871-1872.

Bogaert, D., P.W.M. Hermans, P.V. Adrian, H.C. Rümke, and R. de Groot. 2004. Pneumococcal vaccines: an update on current strategies. Vaccine 22:2209-2220.

Emonts, M., R. de Groot, and P.W.M. Hermans. 2004. Genetic susceptibility to *Neisseria meningitidis* infections. Neth. J. of Med. 62:(S)28-37.

- Bogaert, D., P. van der Valk, R. Ramdin, M. Sluijter, E. Monninkhof, R. Hendrix, R. de Groot, and P.W.M. Hermans. 2004. Host-pathogen interaction during pneumococcal infection in patients with chronic obstructive pulmonary disease. *Infect. Immun.* 72:818-823.
- Haralambous, E., M.L. Hibberd, P.W.M. Hermans, N. Ninis, S. Nadel, and M. Levin. 2003. Role of the functional plasminogen-activator-inhibitor-1 4G/5G promoter polymorphism in susceptibility, severity, and outcome of meningococcal disease in Caucasian children. *Crit. Care Med.* 31:2788-2793.
- Bogaert, D., P.W.M. Hermans, I.N. Grivea, G.S. Katopodis, T.J. Mitchell, M. Sluijter, R. de Groot, N.G. Beratis, and G.A. Syrogiannopoulos. 2003. Molecular epidemiology of penicillin-susceptible non- β -lactam-resistant *Streptococcus pneumoniae* isolates from Greek children. *J. Clin. Microbiol.* 41: 5633-5639.
- Sanders, E.A.M., R. Veenhoven, D. Bogaert, A. Schilder, and P.W.M. Hermans. 2003. Effect of conjugate pneumococcal vaccine on recurrent acute otitis media. *Lancet*; 362:1081.
- Veenhoven, R., D. Bogaert, C. Uiterwaal, C. Brouwer, H. Kiezebrink, J. Bruin, E. IJzerman, P.W.M. Hermans, R. de Groot, B. Zegers, W. Kuis, G. Rijkers, A. Schilder, and E.A.M. Sanders. 2003. Effect of conjugate pneumococcal vaccine followed by polysaccharide pneumococcal vaccine on recurrent acute otitis media. *Lancet*; 361:2189-2195.
- Bogaert, D., N.T. Ha, M. Sluijter, N. Lemmens, R. de Groot, and P.W.M. Hermans. 2002. Molecular epidemiology of pneumococcal carriage among children with upper respiratory tract infections in Hanoi, Vietnam. *J. Clin. Microbiol.* 40:3903-3908.
- Overweg, K., D. Bogaert, M. Sluijter, R. de Groot, and P.W.M. Hermans. 2001. Molecular characteristics of penicillin-binding protein genes of penicillin-nonsusceptible *Streptococcus pneumoniae* isolated in The Netherlands. *Microb. Drug. Resist.* 7:323-334.
- Bogaert, D., M.N. Engelen, A.J.M. Timmers-Reker, K.P. Elzenaar, P.G.H. Peerbooms, R.A. Coutinho, R. de Groot, and P.W.M. Hermans. 2001. Pneumococcal carriage in children in The Netherlands: a molecular epidemiological study. *J. Clin. Microbiol.* 39:3316-3320.
- Van Tilburg, P.M.B., D. Bogaert, M. Sluijter, A.R. Jansz, R. de Groot, and P.W.M. Hermans. 2001. Emergence of rifampicin-resistant *Streptococcus pneumoniae* as a result of antimicrobial therapy for penicillin-resistant strains. *Clin. Infect. Dis.* 33:e93-e96.
- Menges, T., P.W.M. Hermans, S.G. Little, T. Langefeld, O. Böning, J. Engel, M. Sluijter, R. de Groot, and G. Hempelmann. 2001. Plasminogen-activator-inhibitor-1 4G/5G promoter polymorphism and prognosis of severely injured patients. *Lancet* 357:1096-1097.
- Syrogiannopoulos, G.A., D. Bogaert, I.N. Grivea, N.G. Beratis, R. de Groot, and P.W.M. Hermans. 2001. Molecular epidemiology of penicillin-susceptible, multidrug-resistant serotype 6B pneumococci isolated from children in Greece. *J. Clin. Microbiol.* 39:581-585.
- Overweg, K., D. Bogaert, M. Sluijter, J.L. Yother, J. Dankert, R. de Groot, and P.W.M. Hermans. 2000. Genetic relatedness within serotypes of penicillin-susceptible *Streptococcus pneumoniae* isolates. *J. Clin. Microbiol.* 38:4548-4553.
- Bogaert, D., G.A., Syrogiannopoulos, I.N. Grivea, R. de Groot, N.G. Beratis, and P.W.M. Hermans. 2000. Molecular epidemiology of penicillin-nonsusceptible *Streptococcus pneumoniae* in Greece. *J. Clin. Microbiol.* 38:4361-4366.
- Goessens, W.H.F., N. Lemmens-den Toom, J. Hageman, P.W.M. Hermans, M. Sluijter, R. de Groot, and H.A. Verbrugh. 2000. Evaluation of the VITEC 2 system for susceptibility testing of *Streptococcus pneumoniae* isolates. *Eur. J. Clin. Microbiol. Inf. Dis.* 19:618-622.
- Overweg, K., M. Sluijter, M. Srodzinski, R. de Groot, and P.W.M. Hermans. 2000. Immune-protective antibodies against capsular polysaccharides do not affect natural competence of *Streptococcus*

pneumoniae: implications for current conjugate vaccination strategies? FEMS Immunol. Med. Microbiol. 29:183-185.

Overweg, K., C.D. Pericone, G.G.C. Verhoef, J.N. Weiser, H.D. Meiring, A.P.J.M. de Jong, R. de Groot, and P.W.M. Hermans. 2000. Differential protein expression in phenotypic variants of *Streptococcus pneumoniae*. Infect. Immun. 68:4604-4610.

Overweg, K., A. Kerr, M. Sluijter, M.H. Jackson, T.J. Mitchell, A.P.J.M. de Jong, R. de Groot, and P.W.M. Hermans. 2000. The putative proteinase maturation protein A of *Streptococcus pneumoniae* is a conserved surface protein with potential to elicit protective immune responses. Infect. Immun. 68:4180-4188.

Pericone, C.D., K. Overweg, P.W.M. Hermans, and J.N. Weiser. 2000. Inhibitory and bactericidal effects of hydrogen peroxide production by *Streptococcus pneumoniae* on other inhabitants of the upper respiratory tract. Infect. Immun. 68:3990-3997.

Hermans, P.W.M., T. Hoogenboezem, and R. de Groot. 2000. Adaptation and survival of *Mycobacterium tuberculosis* in the host. J. Clin. Virol. 16:84-85.

De Galan, B.E., P.M.B. van Tilburg, M. Sluijter, S.J.M. Mol, R. de Groot, P.W.M. Hermans, and A.R. Jansz. 1999. Hospital-related outbreak of infection with multidrug-resistant *Streptococcus pneumoniae* in The Netherlands. J. Hosp. Infect. 42:185-192.

Dejsirilert, S., K. Overweg, M. Sluijter, L. Saengsuk, M. Gratten, T. Ezaki, and P.W.M. Hermans. 1999. Nasopharyngeal carriage of penicillin-resistant *Streptococcus pneumoniae* among children with acute respiratory tract infections in Thailand: a molecular epidemiological survey. J. Clin. Microbiol. 37:1832-1838.

Overweg, K., R. de Groot, and P.W.M. Hermans. 1999. *Streptococcus pneumoniae* flow-cytometric phagocytosis assay (Letter). Clin. Diagn. Lab. Immunol. 6:444.

Overweg, K., P.W.M. Hermans, K. Trzcinski, M. Sluijter, R. de Groot, and W. Hryniewicz. 1999. Multidrug-resistant *Streptococcus pneumoniae* in Poland: identification of emerging clones. J. Clin. Microbiol. 37:1739-1745.

Hermans P.W.M., M.L. Hibberd, R. Booy, O. Daramola, J.A. Hazelzet, R. de Groot, M. Levin, and the Meningococcal Research Group. 1999. 4G/5G promoter polymorphism in the plasminogen-activator-inhibitor-1 gene and outcome of meningococcal disease. Lancet 354:556-561.

Kremer, K. D. van Soolingen, R. Frothingham, W.H. Haas, P.W.M. Hermans, C. Martin, P. Palittapongarnpim, B.B. Plikaytis, L.W. Riley, M.A. Yakus, J.M. Musser, and J.D.A. van Embden. 1999. Comparison of methods based on different molecular epidemiologic markers for typing of *Mycobacterium tuberculosis* complex strains: interlaboratory study of discriminatory power and reproducibility. J. Clin. Microbiol. 37:2607-2618.

Jöbsis, Q., H.C. Raatgeep, S.L. Schellekens, W.C.J. Hop, P.W.M. Hermans, and J.C. de Jongste. 1998. Hydrogen peroxide in exhaled air of healthy children: reference values. Eur. Respir. J. 12:483-485.

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